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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope, with sufficient postage, addressed to Commissioner for Patents, Washington, D C 20231, on

July 18, 2001
Date of Deposit

Thomas J. Wrona, Ph D, Reg. No. 44,410
Name of Applicant, Assignee or
Registered Representative


Signature

7/18/01
Date of Signature

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JUL 23 2001

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Our Case No.: 10114-6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Peng G. Wang et al.

Serial No.: 09/758,525

Filing Date: January 10, 2001

For: GLYCOCONJUGATE SYNTHESIS USING A
PATHWAY-ENGINEERED ORGANISM

Examiner: To Be Assigned

Group Art Unit No.: 1633

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed below and on the attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

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JUL 23 2000

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The references now cited are the following:

U.S. PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
5,180,674	1/19/93	Roth	435/288	4/11/91
5,288,637	2/22/94	Roth	435/288	10/02/92
5,583,042	12/10/96	Roth	435/288	3/22/94
5,879,912	3/09/99	Roth	435/72	6/17/96
6,030,815	2/29/00	DeFrees et al.	435/97	4/10/96

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY
EP 0 861 902 A1	9/02/98	EPO ✓
EP 0 870 841 A1	10/14/98	EPO ✓
WO 92/14827	9/03/92	WIPO ✓
WO 97/33974	9/18/97	WIPO ✓
WO 98/11247	3/19/98	WIPO ✓
WO 98/12343	3/26/98	WIPO ✓

OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

Wong et al., "Enzyme-Catalyzed Synthesis of N-Acetylglucosamine with in Situ Regeneration of Uridine 5-Diphosphate Glucose and Uridine 5-Diphosphate Galactose", <i>J. Org. Chem.</i> , Vol. 47, 1982, pp 5416-5418
Joachim Thiem et al., "Synthesis of Galactose-Terminated Oligosaccharides by Use of Galactosyltransferase", <i>Synthesis</i> , 1992, pp 141-145
Naoki Asano et al., "Enzymic synthesis of α - and β -D-glucosides of 1-deoxynojirimycin and their glycosidase inhibitory activities", <i>Carbohydrate Research</i> , Vol. 258, 1994, pp 255-266
Andre Lubineau et al., "Porcine liver (2 \rightarrow 3)- α -sialyltransferase: substrate specificity studies and application of the immobilized enzyme to the synthesis of various sialylated oligosaccharide sequences", <i>Carbohydrate Research</i> , Vol. 300, 1997, pp 161-167
Christelle Breton et al., "Sequence-Function Relationships of Prokaryotic and Eukaryotic Galactosyltransferases", <i>J. Biochem.</i> , Vol. 123, 1998, pp 1000-1009
Satoshi Koizumi et al., "Large-scale production of UDP-galactose and globotriose by coupling metabolically engineered bacteria", <i>Nature Biotechnology</i> , Vol. 16, 1998, pp 847-850
Xi Chen et al., "Carbohydrates on transplantation", <i>Chemical Biology</i> , 1999, pp 650-658

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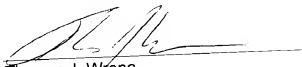
OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)	
Tetsuo Endo et al., "Large-scale production of <i>N</i> -acetylglucosamine through bacterial coupling", Carbohydrate Research, Vol. 316, 1999, pp 179-183	
Brenda Lougheed et al., "Glycosyl Fluorides Can Function as Substrates for Nucleotide Phosphosugar-dependent Glycosyltransferases", The Journal of Biological Chemistry, Vol. 274, No. 53, 1999, pp 37717-37722	
Leigh Revers et al., "Development of recombinant, immobilized β -1, 4-mannosyltransferase for use as an efficient tool in the chemoenzymatic synthesis of <i>N</i> -linked oligosaccharides", Biochimica et Biophysica Acta, Vol. 1428, 1999, pp 88-98	
Xi Chen, "Cloning the Donor Cofactor of Bovine α 1,3-Galactosyltransferase by Fusion with UDP-galactose 4-Epimerase", The Journal of Biological Chemistry, Vol. 275, No. 41, 2000, pp 31594-31600	
Kiyotaka Fujita et al., "Synthesis of Neoglycoenzymes with Homogeneous <i>N</i> -Linked Oligosaccharides Using Immobilized Endo- β - <i>N</i> -acetylglucosaminidase A", Biochemical and Biophysical Research Communications, Vol. 267, 2000, pp 134-138	
T. Endo et al., "Large-scale production of CMP-NeuAc and sialylated oligosaccharides through bacterial coupling", Appl. Microbiol Biotechnol, Vol. 53, 2000 pp 257-261	
Kazukiko Tabata et al., "Production of UDP- <i>N</i> -acetylglucosamine by coupling metabolically engineered bacteria", Biotechnology Letters, Vol. 22, 2000, pp 479-483	

In accordance with 37 C.F.R. § 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

This Information Disclosure Statement is being filed prior to the receipt of the first Official Action reflecting an examination on the merits and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with filing of this Information Disclosure Statement. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Brinks Hofer Gilson & Lione Deposit Account No. 23-1925.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'T. Wrona', is written over a horizontal line.

Thomas J. Wrona
Registration No. 44,410
Agent for Applicants

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(312) 321-4200



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FORM PTO-1449	SERIAL NO. 09/758,525	CASE NO. 10114/6
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE January 10, 2001	GROUP ART UNIT 1633
APPLICANT(S): Peng G. Wang et al.		

(use several sheets if necessary)

REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS/SUBCLASS	FILING DATE
A1	5,180,674	1/19/93	Roth	435/288	4/11/91
A2	5,288,637	2/22/94	Roth	435/288	10/02/92
A3	5,583,042	12/10/96	Roth	435/288	3/22/94
A4	5,879,912	3/09/99	Roth	435/72	6/17/96
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A10	WO 98/11247	3/19/98	WIPO	in Japanese	Abstract	
A11	WO 98/12343	3/26/98	WIPO	in Japanese	Abstract	

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A12	Wong et al., "Enzyme-Catalyzed Synthesis of N-Acetylglucosamine with in Situ Regeneration of Uridine 5-Diphosphate Glucose and Uridine 5-Diphosphate Galactose", J. Org. Chem., Vol. 47, 1982, pp 5416-5418
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A14	Naoki Asano et al., "Enzymic synthesis of α - and β -D-glucosides of 1-deoxynojirimycin and their glycosidase inhibitory activities", Carbohydrate Research, Vol. 258, 1994, pp 255-266
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A17	Satoshi Koizumi et al., "Large-scale production of UDP-galactose and globotriose by coupling metabolically engineered bacteria", Nature Biotechnology, Vol. 16, 1998, pp 847-850
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EXAMINER	DATE CONSIDERED
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A20

Brenda Loughheed et al., "Glycosyl Flourides Can Function as Substrates for Nucleotide Phosphosugar-dependent Glycosyltransferases", The Journal of Biological Chemistry, Vol. 274, No. 53, 1999, pp 37717-37722

A21

Leigh Revers et al., "Development of recombinant, immobilized β -1, 4-mannosyltransferase for use as an efficient tool in the chemoenymatic synthesis of N-linked oligosaccharides", Biochimica et Biophysica Acta, Vol. 1428, 1999, pp 88-98

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Xi Chen, "Changing the Donor Cofactor of Bovine α 1,3-Galactosyltransferase by Fusion with UDP-galactose 4-Epimerase", The Journal of Biological Chemistry, Vol. 275, No. 41, 2000, pp 31594-31600

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T. Endo et al., "Large-scale production of CMP-NeuAc and sialylated oligosaccharides through bacterial coupling", Appl. Microbiol Biotechnol, Vol. 53, 2000 pp 257-261

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